

**WHAT IS CLAIMED IS:**

1. A communication system comprising:  
a managed voice over internet protocol (VoIP) network having an access router  
and a media gateway;  
a virtual circuit coupled to the access router and carrying VoIP traffic from  
customer premises equipment supported by a remote digital subscriber  
line access multiplexer (DSLAM), the DSLAM in communication with  
the access router and in separate communication with a node of a public  
distributed data network.
2. The communication system of claim 1, wherein the public distributed data  
network is the internet and where the node is a broadband remote access server (BRAS).
3. The communication system of claim 1, wherein the customer premises  
equipment includes an internet protocol (IP) phone and wherein the virtual circuit is  
coupled directly to the IP phone.
4. The communication system of claim 1, wherein the virtual circuit is dedicated  
for carrying VoIP traffic and wherein a second virtual circuit carries other type of data  
traffic between the customer premises equipment and the node of the public distributed  
data network.
5. The communication system of claim 4, wherein the second virtual circuit is  
terminated at an Ethernet switch and wherein the Ethernet switch is responsive to the IP  
phone.
6. The communication system of claim 1, wherein the managed VoIP service  
network comprises a Session Initiation Protocol (SIP) proxy module, a software  
telephony switch, and a physical telephony switch, the physical telephony switch coupled  
to the media gateway and coupled to a public switched telephone network.

7. The communication system of claim 6, wherein the SIP proxy module is coupled to the access router and to the software telephony switch.

8. A communication system comprising:

a voice over internet protocol (VoIP) network having an access router and a media gateway responsive to the access router;

a broadband remote access server (BRAS) coupled to the access router via a link having associated policy based routing that prioritizes communication of VoIP traffic with respect to other data traffic; and

a virtual circuit coupled to the BRAS and carrying VoIP traffic from customer premises equipment supported by a remote digital subscriber line access multiplexer (DSLAM).

9. The communication system of claim 8, wherein the customer premises equipment includes an internet protocol (IP) phone and wherein a first point to point over Ethernet (PPPoE) session is established over the virtual circuit between the BRAS and the IP phone.

10. The communication system of claim 9, wherein the first PPPoE session is dedicated for carrying VoIP traffic and wherein a second PPPoE session circuit carries other type of data traffic over the virtual circuit.

11. The communication system of claim 9, wherein the second PPPoE session is terminated at an Ethernet switch and wherein the Ethernet switch is responsive to the IP phone.

12. The communication system of claim 9, wherein the second PPPoE session carries traffic to an internet service provider to provide access to the internet.

13. The communication system of claim 8, wherein the VoIP network comprises a Session Initiation Protocol (SIP) proxy module, a software telephony switch, and a physical telephony switch, the physical telephony switch coupled to the media gateway and coupled to a public switched telephone network.

14. The communication system of claim 13, wherein the SIP proxy module is coupled to the access router and to the software telephony switch.

15. A communication system comprising:

a voice over internet protocol (VoIP) network having an access router;

a broadband remote access server (BRAS) coupled to the access router via a tunnel connection that is dedicated to carrying communication of VoIP traffic from the BRAS; and

a virtual circuit terminating at the BRAS and carrying VoIP traffic via a first PPPoE session and carrying other data traffic via a second PPPoE session from customer premises equipment supported by a remote digital subscriber line access multiplexer (DSLAM).

16. The communication system of claim 15, further comprising internet service provider equipment, wherein the second PPPoE session is between an Ethernet switch at the customers premises equipment and the internet service provider equipment.

17. The communication system of claim 15, wherein the customer premises equipment comprises an internet protocol (IP) telephone and wherein the first PPPoE session is between the IP telephone and the access router of the VoIP network.

18. The communication system of claim 17, wherein the IP telephone is configurable as to selection of a communication protocol.

19. The communication system of claim 18 wherein the communication protocol is one of PPPoE and IP over Ethernet.

20. The communication system of claim 19, wherein the IP telephone includes a PPPoE function key.

21. A voice over internet protocol (VoIP) telephone apparatus comprising:  
an encoder and decoder module responsive to a handset of the VoIP telephone apparatus;  
a data processor responsive to the encoder and decoder module;  
a point to point over Ethernet (PPPoE) client software module responsive to the data processor;  
a memory to store PPPoE session information; and  
a PPPoE function key that is used to launch a PPPoE communication session.

22. The apparatus of claim 21, further comprising a display screen and a telephone keypad, wherein the display screen includes a PPPoE indicator that is configured to display a connection status of a PPPoE session and wherein the keypad may be used by a user to enter PPPoE login information.

23. The apparatus of claim 22, wherein the PPPoE login information includes a service provider domain name, a PPPoE login, and a PPPoE authentication password.

24. The apparatus of claim 22, wherein the PPPoE login information includes an internet protocol address of a remote broadband remote access server (BRAS) .

25. The apparatus of claim 22, wherein the PPPoE login information entered at the keypad is stored in the memory.

26. A method of establishing a voice over internet protocol (VoIP) communication, the method comprising:

- receiving a request from a user of an internet protocol (IP) telephone device to establish a PPPoE session to launch a VoIP telephone call;
- retrieving PPPoE login information;
- establishing a point to point over Ethernet (PPPoE) session from the internet protocol (IP) telephone device to an access router of a remote VoIP service provider network in response to the request and in response to retrieving the login information;
- communicating VoIP traffic over the PPPoE session.

27. The method of claim 26, further comprising displaying an indicator on a display of the IP telephone device that the PPPoE session has been established.

28. The method of claim 27, further comprising disconnecting the PPPoE session to terminate the VoIP call in response to a user input device indicating that a user selected a designated PPPoE function key and after the PPPoE session has been disconnected, further comprising displaying an indicator on the display that the PPPoE session has been disconnected.

29. The method of claim 26, further comprising assigning internet protocol (IP) information dynamically to the IP telephone device from a remote VoIP service provider network during a PPPoE authentication stage and establishing the PPPoE session in response to the IP information assigned to the IP telephone device.